Cabinet / Wall Light Installation Guide

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PHYSICAL REQUIREMENTS

Before installing the Midmark Cabinet / Wall Light, ensure the physical room requirements outlined in Figure 1 are met.

NOTE
Unit is shipped with a power cord and plug assembly. Where installation requires a power outlet, outlet must be within 12 feet of wall or cabinet mounting.

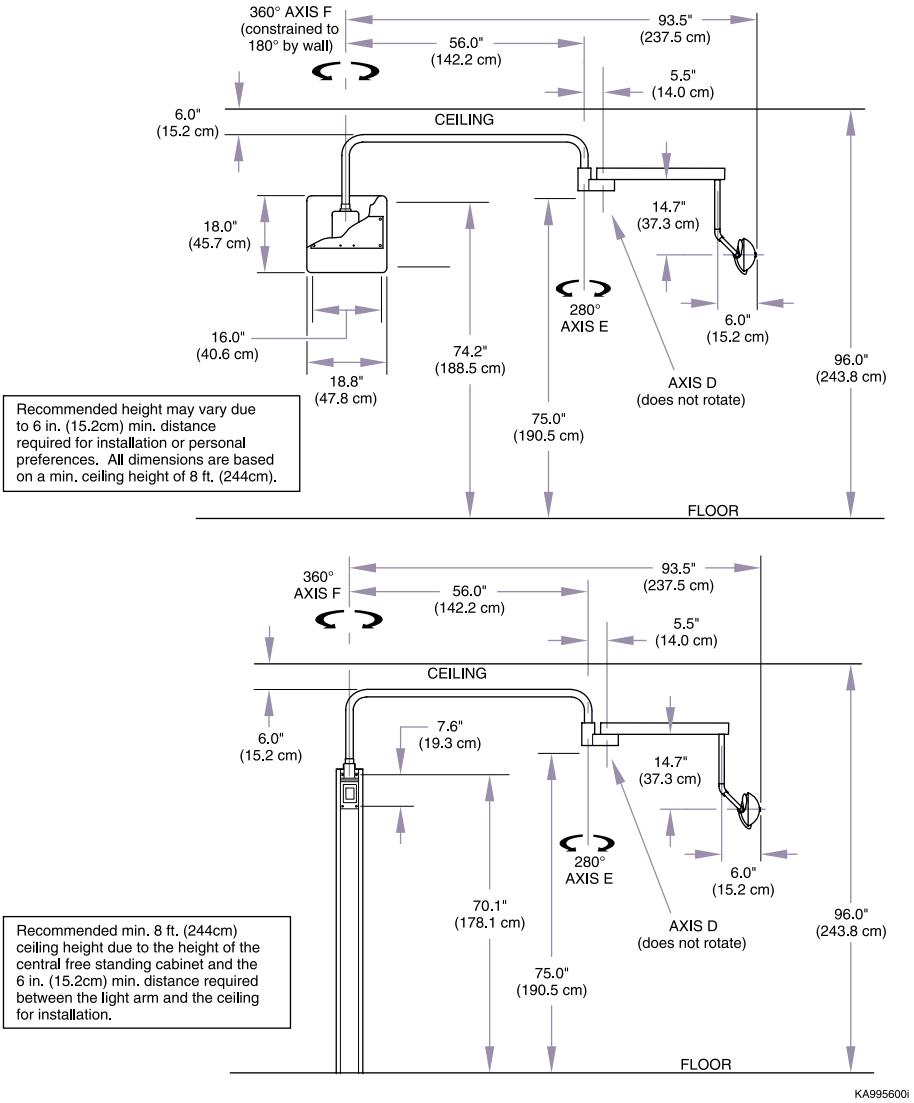

Figure 1. Physical Requirements

GENERAL MOVEMENT CHARACTERISTICS

Figure 2 shows general movement characteristics of the wall or cabinet mounted light.

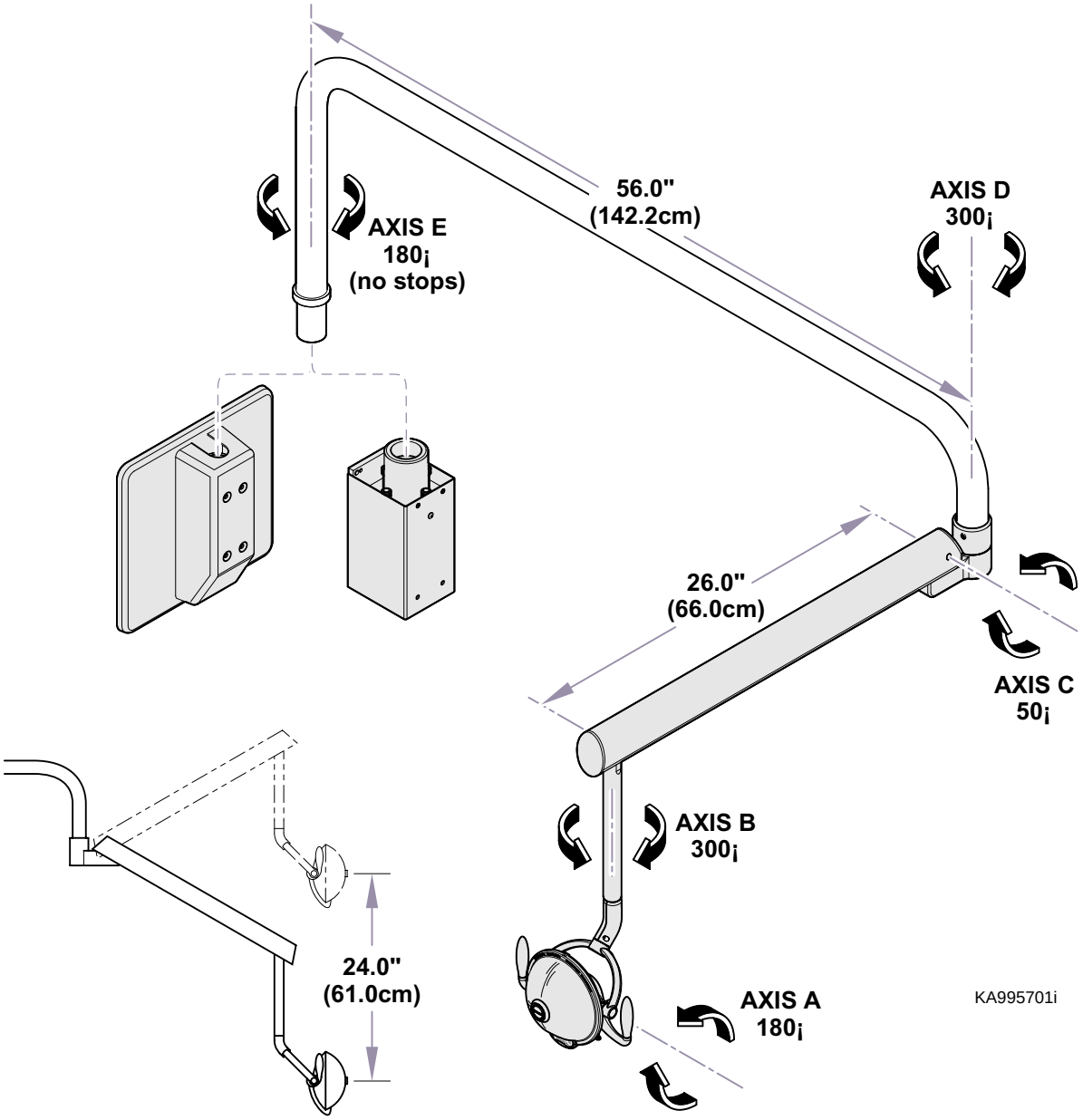

Figure 2. General Movement Characteristics

GENERAL INFORMATION

The support structure must be capable of supporting:

System Only

Weight (Max.).....66 lbs (29.9 kgs)
Torque (Max.).....170 ft-lbs (230.5 N•M)

In addition to supporting the above listed weights, the support structure must also be able to support the light without deflection. To prevent the suspension arm from drifting, the assembly must deflect no more than 1/16" (1.6 mm) over a 12" (30.5 cm) distance.

UNPACKING

(1) Carefully remove all enclosed components from packaging and inspect for shipping damage. If damage is apparent, file a Concealed Damage Report with the carrier.

NOTE
It is the responsibility of the person receiving the goods to file the concealed damage report. **It must be filed with the carrier within 15 days of delivery.**

WALL MOUNT INSTALLATION

Location

The wall mount assembly must be located so the operation of the light and arm assembly does not interfere with procedures or patient access. Power source must be within 12 feet of mounting location.

Structure

The wall mount backer plate must be leveled and secured with appropriate hardware to vertical wall studs or other substantial support structure capable of supporting the total weight of the light and arm assembly (refer to General Information on page 2).

Power Source

Light may be plugged into an appropriate wall outlet or wired to a suitable power source.
The power source must be grounded, and protected by a 15-amp circuit breaker for 115 VAC operation or a 7.5 amp breaker for 230 VAC operation. All wiring must be applicable to state and local codes.

(1) Using template located on shipping box, place in position, level, and mark wall (outside) mount backer holes.

(2) Remove transformer cover (1, Figure 3), four screws.

(3) Slide wall mount cover (2) from light mount assembly (3).

(4) Remove light mount assembly (3) from wall mount backer (4), four screws.

EQUIPMENT ALERT
Failure to secure to a substantial structure with appropriate hardware capable of supporting the light assembly could result in equipment malfunctioning and damage.

(5) Align mounting holes of wall mount backer (4) with location holes on wall and secure with appropriate hardware. Check to assure wall mount backer (4) is level.

(6) Position light mount assembly (3) on wall mount backer (4) and secure with four screws.

NOTE
If supply voltage is 230 VAC refer to ADJUSTING TRANSFORMER FOR 230 VAC.

(7) Place wall mount cover (2) in position on light mount assembly.

(8) Refer to Light Head and Arm Installation before installing transformer cover (1).

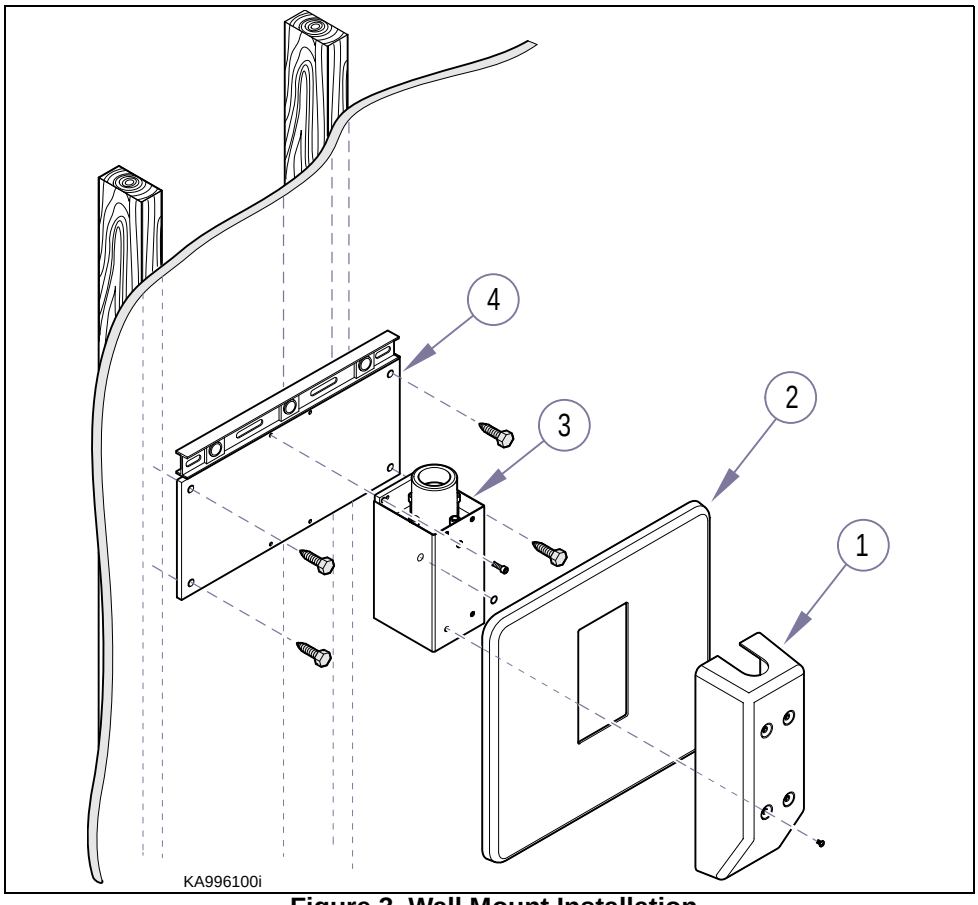

Figure 3. Wall Mount Installation

CABINET MOUNT INSTALLATION

Location

The cabinet mount assembly must be located so the operation of the light and arm assembly does not interfere with procedures or patient access. Power source must be within 12 feet of mounting location.

Structure

The cabinet mount must be leveled and secured to cabinet structure with appropriate hardware (1/4”- 20, grade 8, socket head cap screws) capable of supporting the total weight of the light and arm assembly (refer to General Information on page 2).

Power Source

Light may be plugged into an appropriate wall outlet or wired to a suitable power source.
The power source must be grounded, and protected by a 15-amp circuit breaker for 115 VAC operation or a 7.5 amp breaker for 230 VAC operation. All wiring must be applicable to state and local codes.

(1) Use existing holes from previous light or use template (1, Figure 4) located on shipping box. Place template in position, level, and mark cabinet mounting holes.

NOTE
There are two sets of holes on the template for cabinet mounting. Inside holes (2) are for drilling clearance holes when installing screws from the front into threaded holes or when using washers and nuts.
The outer holes (3) are when installing 1/4-20 screws through cabinet into mounting plate.

EQUIPMENT ALERT
Failure to secure to a substantial structure capable of supporting the light assembly could result in equipment malfunctioning and damage. Mounting hardware must be 1/4”- 20, grade 8, socket head cap screws.

(2) Align mounting holes of mounting bracket (4) with location holes on cabinet and secure with appropriate hardware. Check to assure mounting bracket (4) is level.

NOTE
If supply voltage is 230 VAC refer to ADJUSTING TRANSFORMER FOR 230 VAC.

(3) Refer to Light Head and Arm Installation before installing post mount cover (1).

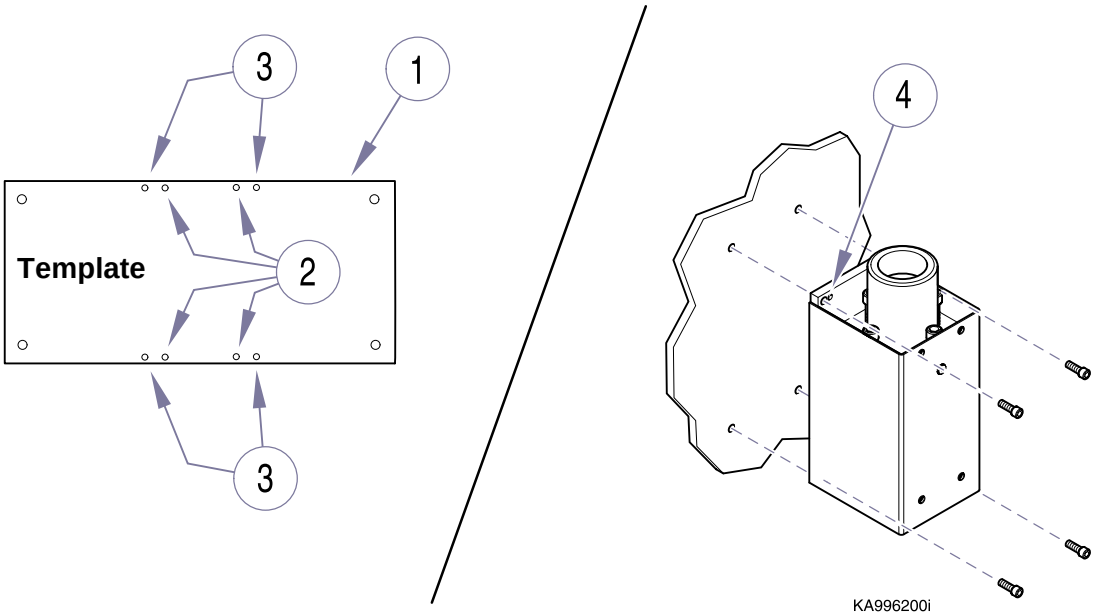

Figure 4. Cabinet Mount Installation

ADJUSTING TRANSFORMER FOR 230 VAC

NOTE
If supply voltage is 230 VAC, the following procedure must be performed before connecting power to light.

(1) Remove transformer cover (1, Figure 5), one screw.

(2) Disconnect lead (brown) (2) from **115 V** tap on transformer and connect to **230 V**.

NOTE
Cabinet units may not have the post mount cover (3).

(3) Install transformer cover (1) and, where applicable, post mount cover (3).

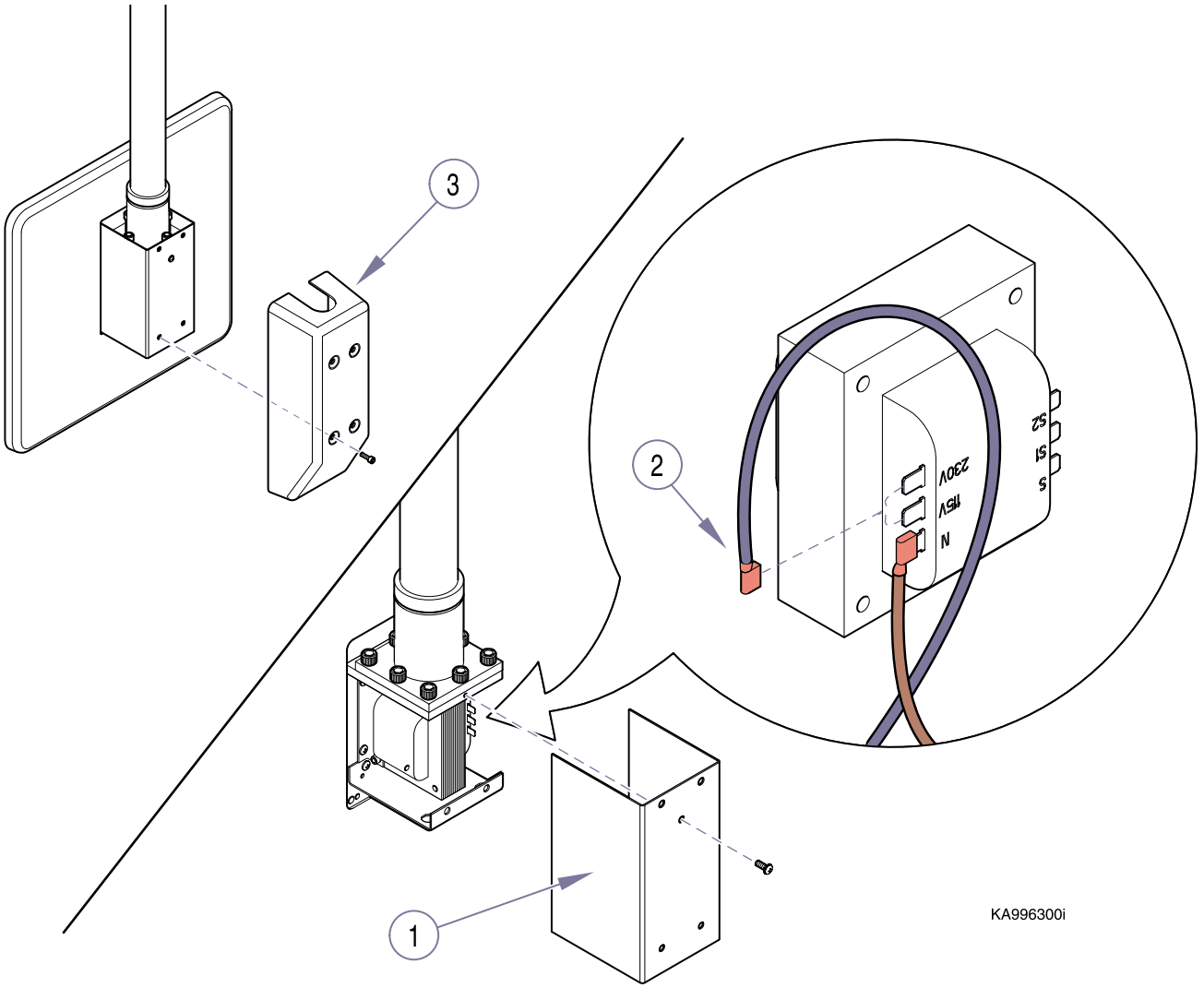

Figure 5. Adjusting Transformer Voltage

INSTALLING PLUG TO POWER CORD

NOTE
If facility voltage is **230 VAC**, install a properly rated plug according to local codes and regulations; then refer to page 5 to adjust transformer.

(1) Remove screw (1, Figure 6) and three pronged portion (2) of plug.

(2) Loosen two screws (3) and insert power cord (4) into housing (5).

(3) Insert BROWN wire from power cord (4) into hole (A); then tighten GOLD screw (6).

(4) Insert BLUE wire from power cord (4) into hole (B); then tighten SILVER screw (7).

(5) Insert GREEN wire from power cord (4) into hole (C); then tighten GREEN screw (8).

NOTE
The three pronged portion (2) of plug may be installed in four different positions. Be sure two tabs on pronged portion align with notches in housing (5).

(6) Rotate three pronged portion (2) of plug to desired position in housing (5); then secure with screw (1).

(7) Tighten two screws (3) so that power cord (4) is secured. Do <u>not</u> overtighten screws.

(8) Plug power cord into properly rated receptacle and check for proper operation.

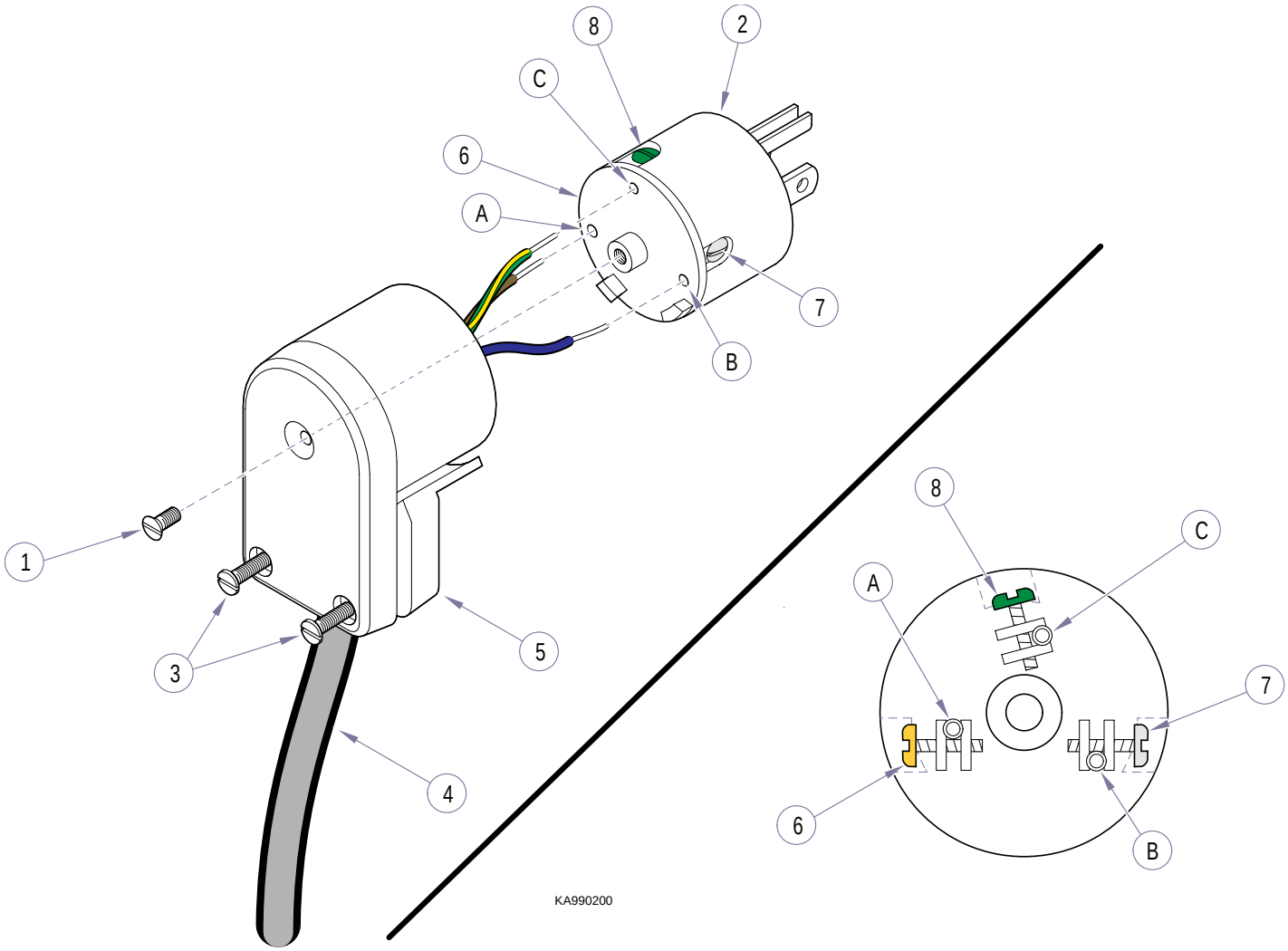

Figure 6. Plug Installation

ARM AND LIGHT HEAD INSTALLATION

(1) Place fixed arm assembly (1, Fig. 7) in position and connecting harness plug (A) from the arm to plug (B) on cabinet / wall mount assembly (2).

(2) Insert arm (1) into bearing housing (C).

(3) Insert collar (3) onto fixed arm (1), snugging up set screw to hold it in place.

EQUIPMENT ALERT
To ensure quiet operation, apply a thin coat of lubricant (included w/light) to inside of suspension tube (1) and bearing shaft of light arm assembly (4) before performing following steps.

(4) Connect harness plug (D) from fixed arm (1) to connector (E) in flex arm assembly (4).

(5) Insert end of flex arm (4) into end of fixed arm (1). Install the key (5), then move the collar (3) down over the key (5) and tighten set screw.

NOTE
The set screw cannot be located over the key.

(6) Check level of fixed arm (1) and, if necessary, loosen or tighten four leveling screws (6).

(7) Tighten mount screws (7) to secure position.

(8) On wall mount units, install the transformer cover (8).

NOTE
Units are equipped with a separate 115 VAC plug for installtion on the cord. The unit can also be direct wired to an appropriate circuit. Should a 230 VAC plug be desired it must be purchased locally.

(9) Connect the unit to the appropriate electrical supply.

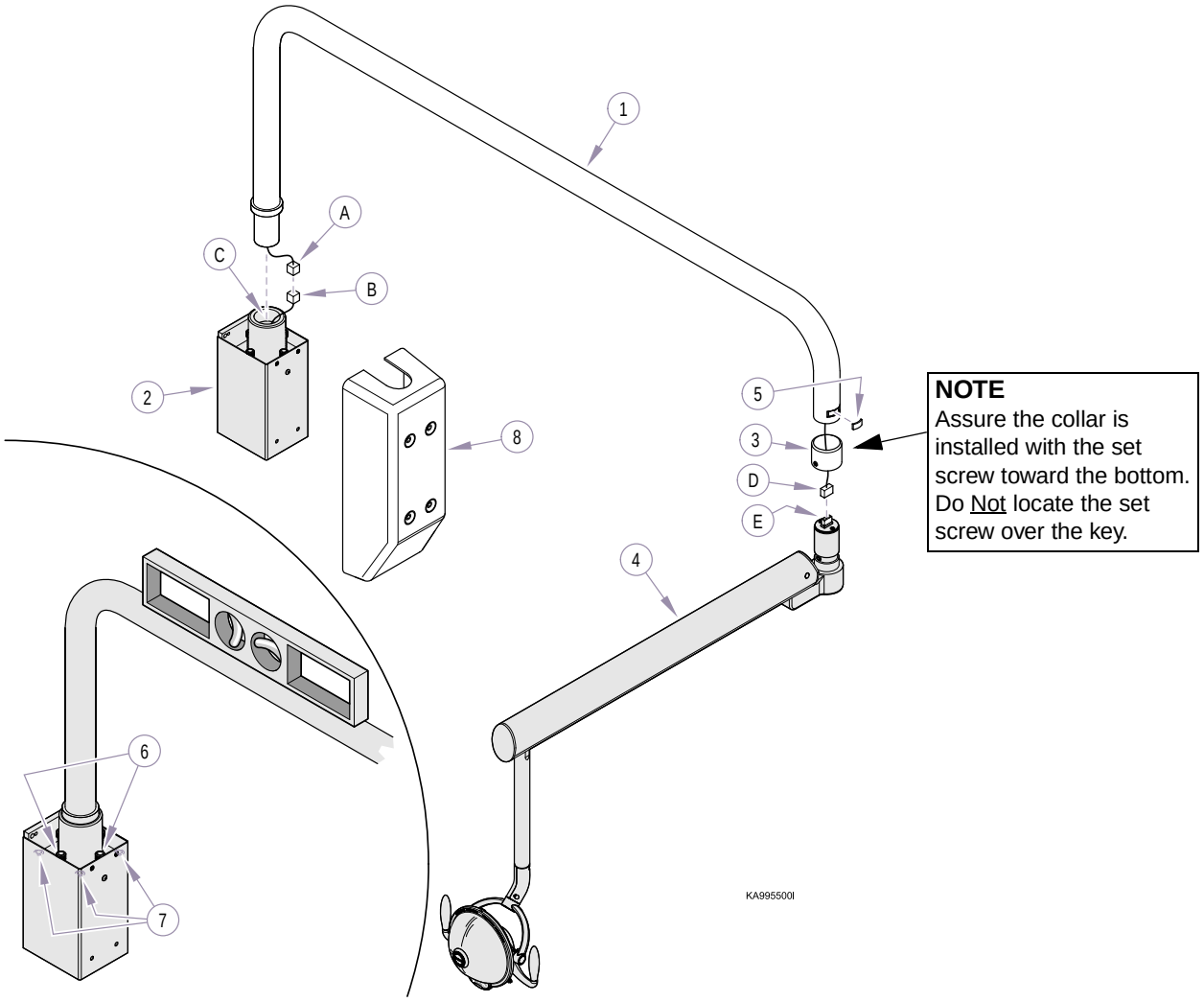

Figure 7. Arm and Light Head Installation

INSTALLATION CHECKLIST

EQUIPMENT ALERT
Answering "NO" to any of the following questions indicates improper installation or a product malfunction. Check all connections, then refer to the Midmark Dental Light Service & Parts manual for corrective action if necessary.

Yes	No	
		With Facility Power ON (and light OFF) *When **Power Button** is pressed once, does light illuminate?*
		*When **Power Button** is pressed twice, does **Auto-On Indicator Light** illuminate?*
		*With **Auto-On** function selected, does light illuminate when light arm is moved below horizontal? (Refer to User's Guide for adjustment).*
		*When **Power Button** is pressed three times,does light shut off?*
		*When **Composite Button** is depressed, does light become noticeably dimmer?*
		*Does **Intensity Button** adjust light beam to three settings (High, Medium, Low)?*

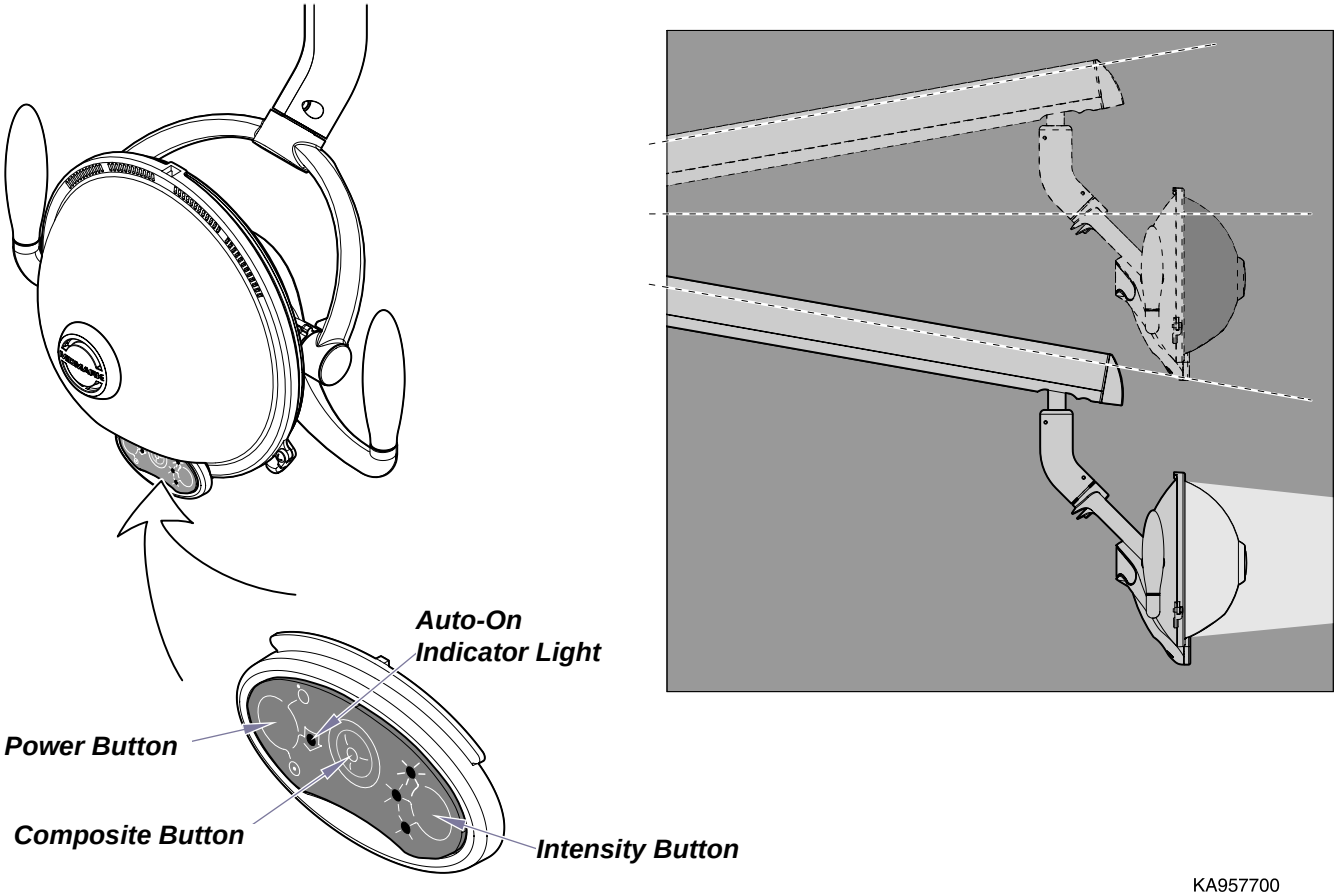

Figure 8. Operational Checks

INSTALLATION CHECKLIST - *continued*

EQUIPMENT ALERT
Answering "NO" to any of the following questions indicates an adjustment is necessary. Refer to the adjustment procedures in Figure 9.

Yes	No	
☐	☐	*Does light move easily at all pivot points?*
☐	☐	*Does **Flex Arm** stay in position without "drifting"?*
☐	☐	*Does lighthead stay in position (at all pivot points) without "drifting"?*

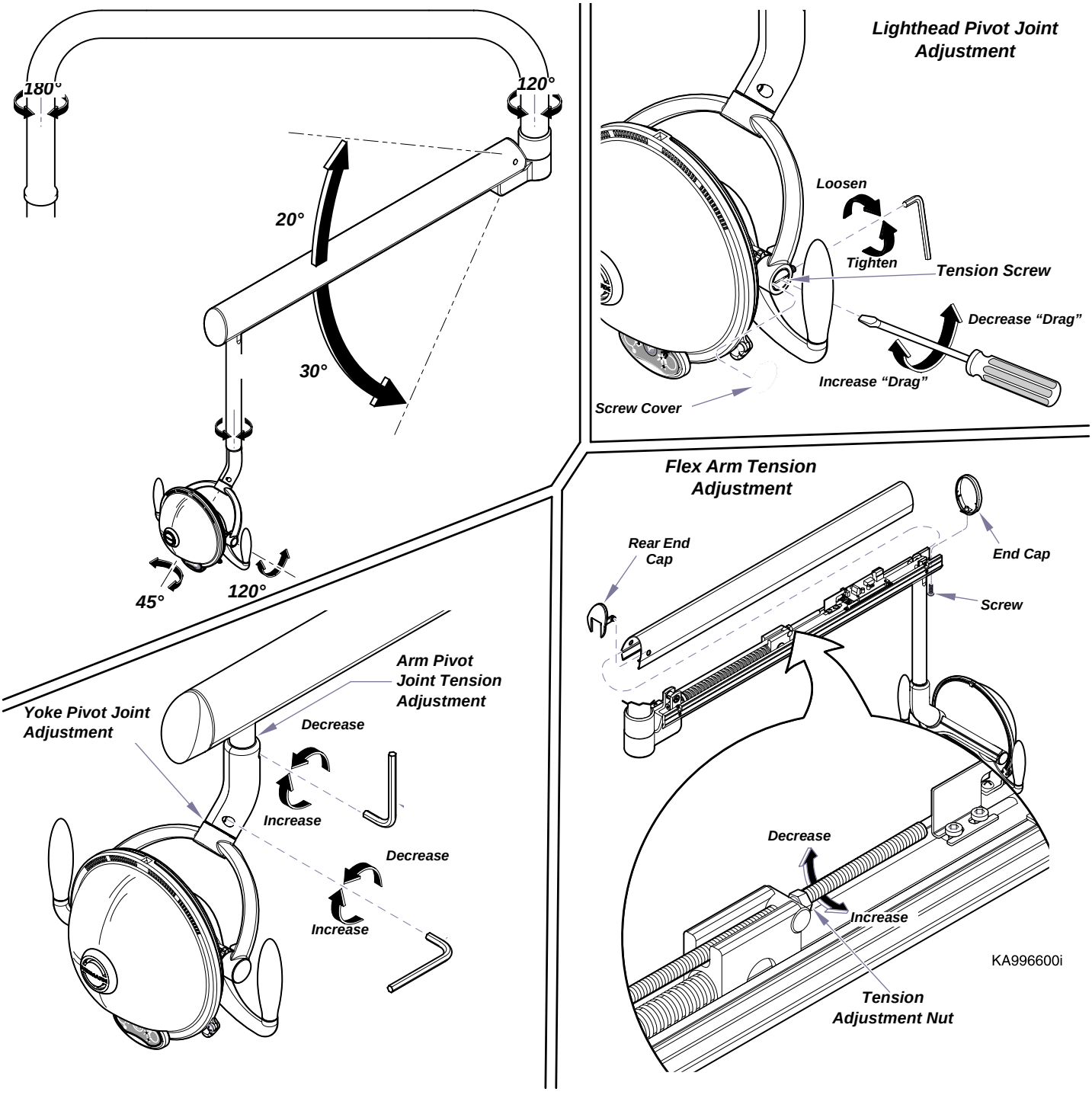

Figure 9. Lighthead / Flex Arm Adjustment Procedures

SPECIFICATIONS

Specifications

Description	Data
Electrical Requirements:	115 / 230 VAC ±10%, 50/60 Hz 1.2 / 0.6 amp, single phase
Bulb:	24 VAC, 150 W Tungston Halogen
Power to Bulb @ Maximum Intensity:	15.7 VAC, 5.5 amps
Fuse:	1/4 x 1 1/4, (3AG) 1.5 amp Type T (Time Delay), 250 VAC
Weight:	66 lbs. (29.9 kgs)
Torque:	170 ft-lbs. (230.5 N•m)
Classifications:	Class 1, Type B, Applied Part, Ordinary Equipment
Certifications:	
Midmark Corporation	ISO-9001
Complies to applicable requirements of:	UL2601-1, CAN/CSA 22.2, #601.1- M90, MDD 93/42/EEC, Annex VII [EN60601-1, EN60601-1-2]

TRANSPORTATION / STORAGE CONDITIONS

- Ambient Temperature Range: ..... -22°F to 140°F (-30°C to 60°C)
- Relative Humidity ..... 10% to 90% (non-condensing)
- Atmospheric Pressure ..... 500hPa to 1060 hPa (0.49atm to 1.05atm)

TORQUE SPECIFICATIONS

Torque specifications apply to hardware used on components unless otherwise noted in these installation instructions:

Torque Specifications

Hardware Size	Torque Values
#6	11 to 21 inch / lbs. (1.2 to 2.3 N•m)
#8	20 to 30 inch / lbs. (2.2 to 3.3 N•m)
#10	32 to 42 inch / lbs. (3.6 to 4.8 N•m)
1/4 inch	75 to 85 inch / lbs. (8.5 to 9.6 N•m)
5/16 inch	18 to 22 ft. / lbs. (24.4 to 29.8 N•m)
3/8 inch	31 to 35 ft. / lbs. (42.0 to 47.5 N•m)
1/2 inch	50 to 60 ft. / lbs. (67.8 to 81.4 N•m)